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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,700

08/16/2006

Gerd Dahms

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EXAMINER

COOLEY, CHARLES E

ART UNIT

PAPER NUMBER

1797

NOTIFICATION DATE

DELIVERY MODE

11/25/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/549,700	Applicant(s) DAHMS ET AL.	
	Examiner Charles E. Cooley	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20050919; 20080815; 20090129</u> . | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL OFFICE ACTION

1. **This application has been assigned to Technology Center 1700, Art Unit 1797 and the following will apply for this application:**

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1797**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

Information Disclosure Statement

2. Note the attached PTO-1449 forms submitted with the Information Disclosure Statements filed 19 SEP 2005, 15 AUG 2008, and 29 JAN 2009.

Drawings

3. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" (37 CFR 1.121(d)) and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
5. The disclosure is objected to because of the following informalities:
 - a. The specification should have the following headings inserted therein at the appropriate locations in accordance with 37 CFR 1.77:

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the title of the invention, each of the lettered items should be preceded by the headings indicated below.

- (a) Title of the Invention.
- (b) Cross-References to Related Applications (if any).
- (c) Statement as to rights to inventions made under Federally-sponsored research and development (if any).
- (d) Background of the invention.
 1. Field of the Invention.
 2. Description of the Related Art including information disclosed under 37 C.F.R. §§ 1.97-1.99.
- (e) Summary of the Invention.
- (f) Brief Description of the Drawing.
- (g) Description of the Preferred Embodiment(s).
- (h) Claim(s).
- (l) Abstract of the Disclosure.

Appropriate correction is required.

6. The Abstract of the Disclosure is objected to because:
 - a. the abstract is not a single paragraph.

Correction is required. See MPEP § 608.01(b).

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7. The title is acceptable.

Claim Objections

8. Claims 17, 19, 20, and 21 are objected to under 37 CFR 1.75(c) because the claims are in improper dependent form as failing to further limit the subject matter of a previous claim (i.e., the device of claim 12). Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Appropriate correction is required.

NOTE: these “method” claims are improper since they fail to further limit apparatus claim 1, from which they depend.

Correction is required.

§ 1.75 Claim(s)

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim (“multiple dependent claim”) shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation purposes also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(j). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

Claim Rejections - 35 U.S.C. § 112, second paragraph

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 14, 15, 16, 18, 22, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15: "the mixing vessels" lacks antecedent basis. It appears this claim should depend from claim 14.

Claim 16: conditional phrases such as "if desired" render the claims scope vague and indefinite.

Claim 18, last two lines are worded in an awkward manner.

Claim 22, line 1 is worded in an awkward manner; "the first mixing vessel" lacks antecedent basis.

Claims 14 and 23: terms such as "it" should positively rather than inferentially recite which element(s) is/are being referred to.

Claim Rejections - 35 USC § 102

11. The terms used in this respect are given their broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art, in light of the written description in the specification, including the drawings, without reading into the claim any disclosed limitation or particular embodiment. See, e.g., *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989).

The Examiner interprets claims as broadly as reasonable in view of the specification, but does not read limitations from the specification into a claim. *Elekta Instr. S.A.v.O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 12, 17, 19, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Prochazka et al. (US 3,855,368).

The patent to Prochazka et al. discloses a device comprising a mixing vessel 1, which is closed on all sides and which has supply tubes 2 and discharge tubes 2 for

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introducing and discharging fluid substances or compositions, and also an impeller 3, 10; the mixing vessel 1 has a substantially cylindrical form (Fig. 4a), the axis of the impeller lies in the cylinder axis (Fig. 1), and the supply tubes 2 and discharge tubes 2 are disposed substantially perpendicular to the cylinder axis in the top and bottom peripheral region of the cylinder, at a distance from one another (Fig. 1).

Method claims 17, 19, 20, and 21 do not further limit the apparatus of claim 12 as noted above.

14. Claims 12, 17, 19, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Zuiderweg (US 3,062,627).

The patent to Zuiderweg discloses a device comprising a mixing vessel 5, which is closed on all sides and which has supply tubes 8, 9, 27 and discharge tubes 10, 11 for introducing and discharging fluid substances or compositions, and also an impeller 16, 24; the mixing vessel 5 has a substantially cylindrical form (Fig. 2), the axis of the impeller lies in the cylinder axis (Fig. 1), and the supply tubes and discharge tubes are disposed substantially perpendicular to the cylinder axis in the top and bottom peripheral region of the cylinder, at a distance from one another (Fig. 1).

Method claims 17, 19, 20, and 21 do not further limit the apparatus of claim 12 as noted above.

Claim Rejections - 35 USC § 103

15. To determine whether subject matter would have been obvious, "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966).

The Supreme Court has noted:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740-41 (2007). "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." (Id. at 1742).

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prochazka et al. (US 3,855,368) or Zuiderweg (US 3,062,627) in view of Falcoff et al. (US 4,403,866).**

Prochazka et al. or Zuiderweg do not disclose at least one sensor is disposed in the discharge tube for continuously measuring the temperature, conductivity and/or optical properties. Falcoff et al. discloses a device comprising a mixing vessel 13 with supply tubes 7-12 and discharge tubes 16 and FILL for introducing and discharging fluid substances or compositions, and also an impeller 14; and at least one sensor 18, 19 is disposed in the discharge tube 16 for continuously measuring the temperature, conductivity and/or optical properties. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made to have provided the discharge tube of Prochazka et al. or Zuiderweg with a sensor therein as taught by Falcoff et al. for the purposes of measuring a property of the mixture and adjusting the feed of materials such that a desired mixture is obtained (col. 3, line 40 - col. 5, line 6).

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19. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prochazka et al. (US 3,855,368) or Zuiderweg (US 3,062,627) in view of Yamazaki et al. (US 6,367,960 B2).

Prochazka et al. or Zuiderweg do not disclose at least two mixing vessels arranged in series with one another, the discharge from the first mixing vessel being introduced into the second mixing vessel, and a further supply tube into the second mixing vessel being provided or that the mixing vessels can be thermally conditioned independently of one another. Yamazaki et al. discloses at least two mixing vessels 3-2 and 4-2 arranged in series with one another, the first mixing vessel having supply tubes and a discharge tube such that the discharge from the first mixing vessel 3-2 is introduced into the second mixing vessel 4-2, the discharge tube being a further supply tube that feeds the second mixing vessel and the mixing vessels can be thermally conditioned independently of one another by respective cooling means 3-2 and warming means 4-2. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made to have provided the devices of Prochazka et al. or Zuiderweg with additional mixing vessels arranged in series with each vessel being thermally conditioned independently of one another as taught by Yamazaki et al. for the purposes of enabling multiple stages of thermal conditioning of a material (e.g., cooling and then heating of the material - col. 9, lines 1-65).

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20. **Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prochazka et al. (US 3,855,368) or Zuiderweg (US 3,062,627) in view of Hamamoto et al. (US 6,899,452 B2),**

Prochazka et al. or Zuiderweg do not disclose that the supply of the fluid substances and the agitated input are under computer control. Hamamoto et al. discloses a device comprising a mixing vessel 251 with supply tubes 253, 257 and a discharge tube 261 for introducing and discharging fluid substances or compositions, and also an impeller 202. The supply of the substances through the supply tubes and the control of the motor for the impeller are all under computer control 250. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made to have provided the devices of Prochazka et al. or Zuiderweg with computer control as taught by Hamamoto et al. for the purposes of controlling the operation of the impeller and the quantities of the materials fed into the mixing vessel (col. 19, lines 1-5 and col. 20, lines 5-28).

Allowable Subject Matter

21. Claims 18, 22, and 23 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 112.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1797 whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri.. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E. Cooley/

Charles E. Cooley
Primary Examiner
Art Unit 1797

24 November 2009